Distance Collaboration – Tools and Strategies for EPA Employees

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EPA employees are increasingly challenged to work collaboratively with teams whose members may be physically located across the country, with limited budgets, while coupled with continual needs to quickly exchange and share information. With emerging technology though, many organizations including EPA, have become better equipped with instruments and methods to overcome the problems presented by distance, time and limited funds. These tools are collectively referred to by many names: "teamware", "groupware" and "distance collaboration tools" are just a few. As the latter name suggests, these electronic tools are all designed to help groups work together virtually from any location as if members were in the same physical space. Examples of such distance collaboration tools include packages to host internet meetings also known as web conferences or "webinars" and online file storage used in conjunction with websites focused around a team or project. Often times, EPA employees do not realize that these tools are available use NOW for AT NO COST, and in most cases can be used to collaborate with groups both internal and external to EPA.

This article will discuss three main strategies for effective and productive distance collaboration techniques that EPA employees should take advantage of. First, EPA employees should make use of ***distance collaboration tools*** for training and virtual meetings. Second, work groups and even individual employees can benefit from the use of ***team/project websites*** to exchange information and coordinate a group's activities. Lastly, EPA employees should maintain some limited ***face-to-face meetings*** to encourage networking and positive social interaction amongst the team members. Each of these approaches is described in more detail below.

1) Use Distance Collaboration Tools to Train and Meet Virtually

A common issue for many regional employees and state partners are limited budgets that restrict them from travel and participation in training sessions and meetings. EPA staff have worked around this travel barrier by hosting distance training or meetings conducted through conference calls while participants sort through materials emailed in advance. However, this approach can be cumbersome because participants must save and access the email in order to follow along. In many instances, the email attachments may overload regional email inbox quotas, not to mention difficulties associated with emailing certain file that can be removed by email virus scanning software.

A whole suite of resources are available to EPA employees to not only attend, but also provide online training sessions. Since 1997, the TIFSD has offered such training to the hazardous waste community through the Clean Up Information Network website, CLU-IN (www.cluin.org/training). Participants are able to move through slides while listening to presenters by phone or computer speaker. They may ask questions both verbally and electronically by submitting a short form during the session. These 2 hour seminars include speaker biographies, contact information, links to additional resources for the topic and have been recorded in several portable formats to download for replay afterwards. Other websites like CLU-IN where EPA employees may receive free online training ranging from simple work force development to more complex remediation technology application training include: Trainex www.trainex.org, GoLearn http://golearn.gov and ERT Virtual University http://www.ertpvu.org.

A more interactive approach uses advanced technology to host "realtime" events through the web. Two different tools are available to all EPA employees: Sametime and Web Conferencing. Each of these tools, while structured slightly differently offers its users the ability to share materials live with the audience who can watch as the speaker moves through their slides and highlights objects along with chatting, polling, white boards, and various screen capture options. In some cases, videos can be shared if participants or

speakers have access to web cams while users can even turn control of their materials over to other participants. Furthermore, EPA staff may also use their existing teleconference services to schedule online presentations through the teleconference website. Commercial solutions such as WebEx, NetMeeting, and Adobe Connect are also used by many EPA offices to conduct online training. Access to these tools will vary by office. One should note however, that almost all of the very same services offered by these commercial tools are available in the EPA tools, Sametime and Web Conferencing, as described above. Distance collaboration tools used by EPA staff are listed below.

- **CLU-IN** (www.cluin.org/training)
- **The Teleconferencing Center** (http://teleconferencingcenter.com/)
- **Sametime** (external access – outside of EPA network https://epastx.rtp.epa.gov/epacenter.nsf)
- **EPA Portal Web Conferencing** (EPA-only site to schedule events http://hawkeye.epa.gov/imtapp/app/home.uix   or Public - for EPA and non-EPA to attend events http://hawkeye.epa.gov/imtapp/app/prelogin.uix)
- **Commercial Solutions – examples: WebEx, GoToMeeting, LiveMeeting, Adobe Connect** (http://webex.com/, http://livemeeting.com , http://gotomeeting.com , http://www.adobe.com/connect)

Many regions have already begun to employ these collaboration tools as vehicles to host "distance meetings" where participants on flex-schedules or in different offices can easily meet to view materials as if they were all seated in the same room. *Regional teams have hosted conceptual site model reviews online* using commercial packages which allowed team members to watch and interact with a live computer simulation produced by an off-site contractor. OEI offers its annual security assessment training online using Sametime to instruct both HQ and regional employees simultaneously. The *Superfund Remedy Review board conducted a site review meeting* using the new EPA Portal Web Conference to draft a response document. ORD has hosted training dry-runs in the same way to allow for regional groups to comment on their course. *OSWER and ORD are now offering their monthly seminar series online* with the EPA Portal Web Conference to expand beyond their traditional delivery mechanisms. OSRTI staff have also used these tools to help with conference planning when planning committee members were on travel and unable to meet in the same location. The next *Federal Remediation Technology Roundtable Meeting will also be hosted online* with this tool to allow for greater participation from federal agencies across the country.

2) Team/Project Based Websites to manage and share information

While online training and web-based meetings can help to develop a team and connect members together for specific event, those tools do not provide longer-term support for the group. Another valuable distance collaboration resource are project or team-based websites. These tools use the internet to make the exchange of information quick and seamless by creating virtual "work areas". At times one of the most vital elements to any project is accessibility to information related to that project. While the use of emails to share these materials as well as communicate with the team has most certainly proved to be an invaluable asset to the work accomplished by our teams, there are drawbacks as previously mentioned. Often times, team members can lose or accidentally delete emails thereby requiring another person to resend or forward content. Occasionally files are too large to send by email and must be uploaded to an FTP site which may still present difficulties in accessing the materials. Email programs may also strip or filter out email attachments. More importantly, this approach allows parties to rely upon email as a file storage mechanism rather than a communication tool. As teams grow and change overtime, new members have no way to quickly review the materials and work completed aside from whatever the team members chose to share with them. Comments and edits to documents and products of the team usually are submitted in various formats, in different methods on sometime long timeframes which can lead to confusion over which version

is the "latest and greatest". Other routine activities such as action item tracking and scheduling of meetings tend to happen through email threads which are at times fail to copy all parties on all replies are not the most effective or efficient approach.

Rather than conducting business in this traditional way, the use of a project team website can provide a space (similar to a "shared drive" available to team members through the internet) where documents can be securely stored and accessed. Many commercial solutions have been developed to quickly create these online work areas that include commonly needed features such as electronic calendars, task tracking, and automatic notifications to the team. Thus, with a project team website, rather than emailing a draft document to request comments from a group, the team members will post this draft document to the team website. Then he or she will use the built-in notification features to alert the team that the document is available for review. One can choose to officially "assign" a task to various members for the review of the document, thereby heightening awareness of the activity and its timeframe. There are no large attachments to emails sent to the group which could be rejected or eat up critical inbox storage. There is no need to fear that the email with the document will be deleted as it will be available on the website, a site that can be bookmarked for quick access by any team member. There is no need to worry about access to email, as this material is posted on a website, accessible from any computer with internet access. Furthermore, the website can be set up to allow for revisions (or even direct online editing of the document), providing the team with a clear history of changes to the document in one location accessible at any time by any team member. Three resources are available to all EPA employees for creating these types on online team areas: QuickPlace, ORD's Environmental Science Connector on the EPA Portal, and the EPA Portal Collaboration Workspaces, which are briefly highlighted below.

- **QuickPlace** (https://epaqpx.rtp.epa.gov)
- **ORD Environmental Science Connector** (http://portal.epa.gov/ESC)
- **EPA Portal Collaboration Workspaces** (http://hawkeye.epa.gov/workspaces)

QuickPlace has been used to support various EPA groups and organizations including: the *EPA Intern Program*, the Emergency Response Team (ERT), the Technology Innovation and Field Services Division, *Community Involvement, Land Revitalization, the Ground Water Forum,* and many others. Each group was able to create a customized space for their teams, including EPA, state, federal partners, and even contractor support. TIFSD has also advocated for the usage of these websites at various Brownfields and Superfund sites receiving technical support to better facilitate the exchange of information amongst various groups as site sampling plans are prepared and reviewed, data are collected, and decisions are made. *EPA managers have used QuickPlace sites to hold travel spreadsheets and electronic calendars* where their staff can quickly and easily make changes to a centralized document. This allows management to stay informed of travel plans without having to keep track of individual employee email responses. Other offices have created their own infrastructure to prepare specialized team websites such as *ERT's WebOSC web* pages (http://epaosc.org/Regionmap.asp) which provide OSCs with standard web spaces to upload information, photos, and contact information which can be shared with the public or kept private for specific team members to access.

3) Face to Face Meetings to Network and Build Teams
The value of face to face meetings cannot be overstated. These events which permit personal interaction and offer team members the ability to physically work together lead to solid, strong working relationships. Furthermore, personal interaction can lead to positive social environments and networking opportunities that can lead to new projects and activities which might not have otherwise been attempted. Working together in person can bring vital stakeholder buy-in to a project by allowing participants to feel as though they have direct contact with all information and parties involved with generated and sharing this

information. Furthermore some training and business activities can only be effectively completed in person such as equipment training where an instructor can physically watch and interact with students. TISFD recognizes this model by sponsoring events for RPMs and OSCs such as the *annual NARPM and OSC Readiness conferences*. These events build upon online training from the various sources listed in part one of this paper, and in more recent times, collaborative environments such as QuickPlace and ERT WebOSC web pages where work is completed by RPMs and OSCs. During these conferences, EPA staff can meet together to build upon their existing relationships, participate in additional training, and forge new partnerships for future efforts.

Summary

Thus, proper application of the three approaches discussed in this paper lead to effective and productive distance collaboration. By using ***distance collaboration tools***, EPA staff can participate in much-needed training and increase meeting attendance by hosting events online to eliminate the need for travel. Groups can also benefit from the use of ***team/project websites*** to exchange information and coordinate a group's activities. When coupled with these online tools, EPA employees should be careful to continue to maintain limited ***face-to-face meetings*** that build social capital and strengthen relationships amongst the team members. With these tools and approaches, EPA staff will be able to work together effective despite location, availability of resources, and funds.

For more information on these approaches and tools for distance collaboration, please contact Jean M. Balent, Technology Innovation and Field Services Division in OSWER, at 703-603-9924 or balent.jean@epa.gov.